AMENDMENTS TO THE SPECIFICATION

Please amend paragraph [0044] as indicated below.

[0044] Explanation is presented below regarding an embodiment of the present invention referring to drawings. The liquid injection system 1000A of an embodiment according to the present invention, comprises liquid injector 100, liquid syringe 200 and MRI apparatus 300, which is a diagnostic imaging apparatus, as shown in FIG. 1 to FIG. 4. The system is intended for injecting a contrast media or the like as a liquid to a patient (not shown) as will be described in detail later.

Please amend paragraph [0050] as indicated below.

[0050] Injection control unit 101 has main operation panel 103, main touch panel 104, which is a display panel, speaker unit 105, etc. arranged on the front face of main body housing 106 ~~116~~ and is wired-connected via joining connector 108 to control unit 107, which is a separate unit.

Please amend paragraphs [0055-56] as indicated below.

[0054] Because two concave portions 114 of injection ~~Injection~~ head 110 are respectively adapted for receiving CM (contrast media) syringe 200C filled with a contrast media as a liquid and/or PS (physiological saline) syringe 200W filled with a physiological saline as a liquid, these two concave portions 114 and two piston actuating mechanisms 117 constitute both CM injection mechanism 117C for injecting a contrast media and PS injection mechanism 117W for injecting physiological saline, to a patient.

[0055] In addition, in liquid injector 100 of the present embodiment at least respective elements of injection head 110 are formed of nonmagnetic material, and the portions that cannot be formed of nonmagnetic material are magnetically shielded. For example, piston actuating mechanisms 117 individually have ultrasonic motors 118A, which are free from generation of

magnetic field even when it is operated, as drive motors ~~moters~~. Ultrasonic motors 118A are formed of nonmagnetic metals such as phosphor bronze alloy (Cu+Sn+P), titanium alloy (Ti—6A1—4V) and magnesium alloy (Mg+Al+Zn). Screw mechanisms of piston actuating mechanisms 117 and the like are formed of nonmagnetic metals and head body 113 and the like are formed of nonmagnetic resin.

[0056] In liquid injector 100 of the embodiment, computer unit 120 controls the operation of piston actuating mechanism 117 of injection head 110 in accordance with the manual operation on main operation panel 103 and/or touch panel 104 and/or controller unit 107 of injection control unit 101. However, injection head 110 has sub operation panel 118B formed on an upper surface of head body 113. Computer unit 120 also controls the operation of piston actuating mechanism 117 of injection head 110 in response to manual operation on sub operation panel 118B.

Please amend paragraph [0061] as indicated below.

[0061] Entering functions 133, 135, . . . correspond to functions of CPU 121 to recognize data based on input actions on main/sub operation panels 103, 118B. Other various functions 138, 139, . . . correspond to functions of CPU 121 to process data.

Please amend paragraph [0068] as indicated below.

[0068] Quantity calculating function 138 calculates the injection quantity from the injection time period and the injection rate for each injection condition stored by condition storing function 137. Image producing function 139 produces a condition image having a horizontal width corresponding to the injection time period and including text data which represents the injection rate and the injection quantity ~~quality~~ for each stored injection condition.

Please amend paragraph [0077] as indicated below.

[0077] Review entering function 147 accepts an input action of a review instruction. As shown in FIG. 9, image displaying function 142 enlarges text data of the condition image when the review instruction is entered. The review instruction may be entered on touch panel 104 on which the injection condition is displayed, but it is normally entered on sub operation panel 118B of injection head 110 separate from touch panel 104.

Please amend paragraph [0083] as indicated below.

[0083] The abovementioned computer program is stored in an information storage medium such as RAM 123 as software for causing CPU 121 or the like to perform processing operations such as display of schematic images of the plurality of body sections registered as data in RAM 123 or the like in the shape of a human body on touch panel 104 and display of a condition screen of horizontal rectangle, under the schematic images, with the vertical axis representing the injection rate of the liquid and the horizontal axis representing the injection time period, reception of an input action on touch panel 104 to select one of the plurality of body sections displayed as the image, display of the schematic image of at least one region to be imaged in association with the selected body section, reception of an input action to select the region to be imaged displayed as the image, display of the injection condition registered as data in association with the selected region to be imaged together with the condition screen, reading of the previous injection conditions of the contrast media and physiological saline for the selected region to be imaged from RAM 123 or the like, reading of the default injection condition when the previous injection condition is not stored, calculation of the injection quantity from the injection time period and the injection rate for each of the stored injection conditions, production of the condition image having the horizontal width corresponding to the injection time period and including the injection rate and the injection quantity as text data for each of the stored injection conditions, display of the produced condition image in the injection screen at the vertical position in association with the injection rate and the horizontal position in association with the injection time period, reception of an input action of the injection condition as edit operation of the displayed condition image, storage of the newly input injection condition to reflect it on the data production for the condition image and display thereof, output of an alarm when the injection rate

of the stored injection condition exceeds the upper limit rate, enlargement of the text data of the condition image displayed on touch panel 104 when a review instruction is entered on the sub operation panel 118B or the like, performance of the liquid injection in response to manual operation on touch panel 104 or the like, calculation of the elapsed time from the start of the injection, and sequential control of the operation of the plurality of piston actuating mechanisms 117 in real time based on the elapsed time and the plurality of stored injection conditions.

Please amend paragraph [0096] as indicated below.

[0096] Thus, when the operator wishes to review the injection condition, the operator enters a review instruction on sub operation panel 118B of injection head 110 (step S16). Then, as shown in FIG. 9, text data of the numerical values of the injection rate and injection quantity displayed in the condition image is enlarged (step S17). The operator can easily review the injection condition of the condition image displayed on touch panel 104 of injection control unit 101.

Please amend paragraphs [0098-99] as indicated below.

[0098] As shown in FIG. 11, liquid injector 100, to which the data to start the operation is sent back from MRI apparatus 300 (step S22), performs a series of liquid injection operations (step S25 and after). In this case, the elapsed time after the start of the injection is measured (step S25). The operations of CM injection mechanism 117C and PS injection mechanism 117W are sequentially controlled in real time based on the elapsed time and the read injection condition (step S26).

[0099] For this end, the imaging operation of MRI apparatus 300 follows up the liquid injection made by liquid injector 100 in the diagnostic imaging system 1000B of this embodiment. For reference, in diagnostic imaging system 1000B of the present embodiment, when liquid injector 100 is in ready state as described above (Steps S14 to S20) and an input operation is made to command MRI apparatus 300 to start an imaging operation (Step Tl) as shown in FIG.

13, liquid injection of liquid injector 100 follows up the diagnostic imaging of MRI apparatus 300 (Steps T4, T6, -, S19, S24, -).

Please amend paragraph [0117] as indicated below.

[0117] Still further, in liquid injection system 1000A of the present embodiment, since the liquid injection performed by liquid injector 100 and the shooting of images made by MRI apparatus 300 are automatically linked to each other, it is enabled to shoot in appropriate timings diagnostic images from the patient, who has had sequential injection treatments of a contrast media and a physiological saline in proper timings,